

REMARKS

Claims 1-19 are in this application and are presented for consideration. By this Amendment, Applicant has amended claims 1, 2, 3, 6, 8, 9 and 10.

Claims 1, 2, 3, 4, 5, 6, 8 and 9 have been objected to because of minor informalities. Applicant has amended the claims paying close attention to the Examiner's remarks so that prosecution of this application may proceed.

Claims 1, 2, 4-9 and 19 have been rejected under 35 U.S.C. 102(e) as being anticipated by Haddock (US 7,100,338).

The present invention relates to a formed sheet edge connection. The edge connection comprises a first sheet with an edge and a second sheet with an edge. The first sheet has mounts arranged thereon and the second sheet comprises flanges arranged thereon. The first sheet is mounted on top of the second sheet so that the mounts and flanges are bent in the same direction and so that the mounts are in flat contact with the flanges. A clamping strip detachably connects the sheets at the mounts and flanges. A screw connection connects the clamping strip and the mounts and mounting flanges of the first and second sheets. A seal is advantageously inserted into the area of contact between the first sheet and the second sheet. The seal advantageously prevents dirt and other impurities from entering the contact region of the two sheets. Applicant has discovered a solution to the problem of connecting the two sheets without having to create a permanent connection by spot welding the two sheets together. The present invention provides a detachable connection of the edges of sheets in which tacking is no longer required, which advantageously allows the two sheets to be

separated without damage to either of the two sheets. This advantageously allows for an easy connection of the outer sheet to the inner sheet once the outer sheet and inner sheet have been separately painted.

Haddock discloses a clamp 360. The clamp 360 is mounted on a standing seam 354 of a panel assembly 350 that is defined by a plurality of interconnected panels 352. The standing seam 354 includes an extension 356 that is vertically disposed and a head 358 that is horizontally disposed on the distal portion of the standing seam 354. The clamp 360 includes a clamp body 362. The clamp body 362 includes a concave clamp body slot 364, a seam fastener hole 366 disposed on one side of the clamp body slot 364 and a seam fastener 368 for each seam fastener hole 366. The clamp body 362 also includes a seam recess 365 formed in the clamp body 362 on the opposite side of the clamp body slot 364 and a mounting cavity 370 on an exterior surface of the clamp body 362. The clamp 360 includes an insert 372 that is disposed within the clamp body slot 364 on the same side of the extension 356 of the standing seam 354 as the seam fastener 368. Part of the insert 372 is disposed below the head 358 of the standing seam 354 and part of the insert 372 is axially aligned with the seam fastener hole 366. The insert 372 is disposed within the clamp body slot 364 and is disposed below the head 358 of the standing seam 354. The insert 372 includes a seam fastener receptacle 374. Each seam fastener hole 366 in the clamp body 362 is aligned with a seam fastener receptacle 374 on the insert 372 to register the seam fastener 368 relative to the insert 372. When the clamp 360 is installed on the standing seam 354 each seam fastener 368 is directed through its corresponding seam fastener hole 366 so as to extend into the clamp body slot 364. Each seam

fastener 368 sits within a fastener receptacle 374 on the insert 372 to force the insert 372 into engagement with the extension 356 of the standing seam 354. This forces the extension 356 of the standing seam 354 into engagement with an opposing and aligned portion of the clamp body 362 that defines the clamp body slot 364. A deformation of the extension 356 of the standing seam 354 in the direction of forces applied by the seam fastener 368 is provided by the protrusion 376 on the insert 372 pushing the extension 356 of the standing seam 354 into an aligned seam recess 365 on the clamp body 362. This places the insert 372 entirely in compression in the installed position on the standing seam 354.

Haddock fails to teach or suggest the combination of a plurality of mounts on one sheet that attach to a plurality of mounting flanges on another sheet. At most Haddock discloses a standing seam 354 of a panel assembly 350 that is defined by a plurality of interconnected panels 352. The plurality of interconnected panels 352 of Haddock do not have a plurality of mounts on one panel that is in flat contact with mounting flanges on another panel. In contrast to Haddock, the present invention takes a different approach. In the present invention, a first sheet has a plurality of mounts arranged thereon and a second sheet has a plurality of mounting flanges arranged thereon. Each mounting flange of the present invention is in flat contact with each mount. In the present invention, a clamping strip detachably connects the first and second sheet at the mounts and the mounting flanges. Haddock fails to disclose a plurality of mounts on one extension that attach to a plurality of mounting flanges on another extension. The interconnected panel 352 of Haddock does not have an edge comprising a plurality of mounts arranged thereon.

Haddock fails to teach or suggest the combination of a seal inserted into an area of contact between a first sheet and a second sheet. Haddock clearly shows in Figure 9 that insert 372 is provided outside the interconnected panels 352. Haddock takes a different approach than the present invention. In Haddock, each seam fastener 368 sits within a fastener receptacle 374 on the insert 372 to force the insert 372 into engagement with the extension 356 of the standing seam 354. This disadvantageously creates a deformation of the extension 356 of the standing seam 354 in the direction of forces applied by the seam fastener 368. The deformation of the extension 356 of the standing seam 354 disadvantageously creates a weaker connection between the interconnected panels 352. In contrast to Haddock the present invention provides a seal directly between the first sheet and the second sheet. This advantageously prevents impurities from entering the contact area located between the two sheets without weakening the strength of the two sheets by deformation as disclosed in Haddock. The insert 372 of Haddock is not applied in a contact area of the interconnected panels 352. As such, the prior art as a whole teaches a different approach and fails to suggest the features of the present invention. Accordingly, Applicant respectfully requests that the Examiner favorably consider claims 1 and 19 and all claims that respectively depend thereon.

Claims 3 and 10 -18 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Haddock.

As already discussed above, Haddock fails to teach or suggest a first sheet with an edge comprising a plurality of mounts arranged thereon. At most, Haddock suggests extensions 356 of a standing seam 354 that are deformed via a seam fastener 368 and insert 372 so that the

extensions 356 are in contact with one another. The present invention takes a different approach. The first sheet of the present invention has an edge comprising a planar contact region flange. A second sheet having an edge having a planar contact region flange is arranged on top of the first sheet such that the flanges are bent in the same direction. The fact that the flanges are bent in the same direction is significant in the present invention for appearance purposes because the edges of the sheets cannot be visible from the outside when the sheets are attached to the motor vehicle body. A clamping strip is provided to advantageously secure the connection between the flanges. This advantageously allows for a detachable connection without having to use a tacking technique. In contrast, Haddock teaches a standing seam 354 having extensions 356 that are deformed to be in contact with one another. Haddock fails to provide contact region flanges on one extension to attach to contact region flanges on another extension such that the flanges are bent in the same direction. As clearly shown in Figure 9 of Haddock, the head 358 of the extension 356 is not bent in the same direction as the head of the other extension. Figure 9 of Haddock clearly shows that the head of one extension is bent around the head of another extension. As such, the prior art takes a different approach and fails to provide the features or advantages of the present invention. Accordingly, Applicant respectfully requests that the Examiner favorably consider claim 10 and all claims that depend thereon.

Haddock fails to teach or suggest a sealing adhesive inserted into an area of the planar contact areas of the first and second sheet. As clearly seen in Fig. 9 of the Haddock disclosure, there is no sealing adhesive inserted in the area of the extensions 356. The sealing adhesive

advantageously seals the area of the planar contact areas so that no dirt or any other impurity gets in between the contact area of the two sheets. The Haddock reference fails to suggest such an advantage. Haddock provides a connection that pertains to sheet metals that are arranged on the outside facades of buildings. The present invention deals with connection of the edges of sheet metal for motor vehicles, which requires a highly precise and durable, waterproof connection of the sheet metals. The sealing adhesive is of crucial importance as it is important that no moisture enter between the outer sheet and the inner sheet to avoid corrosion. One of ordinary skill in the art would not be motivated to provide sealing adhesive to the connection arrangement of Haddock since Haddock fails to be concerned with the problem of preventing moisture from entering the connection. Haddock fails to disclose inserting sealing adhesive in the contact area of the extensions 356. As such, the prior art as a whole fails to provide the features and advantages of the present invention. Accordingly, Applicant respectfully requests that the Examiner favorably consider claim 10 as now presented and all claims that depend thereon.

Favorable action on the merits is respectfully requested.

Respectfully submitted
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